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ABSTRACT

A study assessed and compared the effectiveness of two distinct approaches of bilingual education used within a single school district in El Paso (Texas). The program designs, one a traditional transitional bilingual and the other a bilingual immersion, were implemented under similar conditions of resources, school year length, class size, and other instructionally relevant variables. The immersion program used whole language, natural language, and sheltered English methodologies; the transitional program was characterized by teaching of basic concepts, basic language arts, and subject matter in the native language, with gradual introduction of English to teach subject matter and concepts. Data on student achievement were collected between 1985 and 1991 on over 350 limited-English-proficient students in 10 elementary schools, and a detailed longitudinal analysis was conducted on 230 students. Results show that in fourth grade, immersion students performed better in all aspects of academic performance, and particularly language skills, but by seventh grade, no significant differences were found in any aspect. Surveys of and interviews with bilingual program teachers, parents, and students revealed strengths and weaknesses, but general support. These results are detailed. Contains 59 references. (MSE)

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ED 389 162

Bilingual Immersion

A Longitudinal Evaluation of the El Paso Program

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Executive Summary

Bilingual immersion is an innovative approach to the education of language minority students. Its purpose is to rapidly introduce language minority students to English in a meaningful fashion during the early years of school by sensitively integrating second language instruction into content area instruction. Bilingual immersion holds great promise for enhancing and reconceptualizing school programs for language minority students. Potentially, bilingual immersion can integrate language minority students into the mainstream rapidly.

Several factors contributed to the conception and implementation of the bilingual immersion program in the El Paso Independent School District. First and foremost was a belief by teachers, district administrators, and members of the Latino community in El Paso that bilingual education—as it was being implemented in the early 1980's—failed to capitalize on students' burgeoning knowledge of the English language. Many of the limited-English-proficient students in El Paso schools, though they were hardly fluent in English, quickly acquired the rudiments of basic conversational English.

Many teachers in El Paso began to wonder if reading, math, and social studies instruction could be provided to these students in English *in a meaningful, comprehensible fashion.* If it were possible to do this, English language acquisition could be accelerated without diminishing the development of students' reading, writing and mathematical abilities. This thinking led to the creation and large-scale implementation of bilingual immersion by the district.

Bilingual immersion is built upon many of the same concepts of language acquisition as other approaches towards bilingual education. In particular, the model addresses the need to:

- provide continuous, comprehensible instruction,
- nurture both the child's self-esteem and respect for her or his native language and culture, and
- build upon the strength of the child's first language for certain aspects of cognitive development.

Bilingual immersion differs in many ways from transitional bilingual education. With bilingual immersion, most of the students' instructional day is conducted in English *from the first day of first grade.* Bilingual immersion is structured and designed so that students *understand* what they are taught and so that their interaction with the English language is meaningful from the very first day.

Prior to the development of the bilingual immersion model, El Paso relied solely on its transitional bilingual education program to meet the needs of language minority students. That program is typical of many of its kind in urban areas in the United States in that the major part of the students' instructional day during the first four to five years is in Spanish, with 60 to 90 minutes a day reserved for English language instruction. When students' English language abilities have developed to a certain point, they begin the transitional phase of the program, in which they are given formal reading instruction and are taught their content area classes in English.

Research and Evaluation Study

The evaluation research reported in this monograph compares the lasting academic effects of bilingual immersion and transitional bilingual education, two very different approaches to second language instruction that are used within the El Paso district. This longitudinal study involved students in grades 4 through 7, a time when students are proficient enough in English to be assessed on standardized achievement tests in that language. In the study, students were tested on all subtests of the Iowa Test of Basic Skills (ITBS). The rate at which students enter mainstream English-language classrooms during the sixth grade was investigated, and the achievement test results were augmented with data from teacher and parent questionnaires and student interviews.

Achievement

Significant differences were initially apparent in grades 4, 5, and 6 in both reading and language. Nonetheless, by the seventh grade the ITBS scores show no significant differences in performance that can be related to the two bilingual programs.

Moreover, it is important to note that by the sixth and seventh grades the students' absolute level of English language achievement was low compared to national norms for low income students. Neither the bilingual immersion program nor the transitional bilingual education program brought its students up to these norms, especially in the areas of reading (23rd-24th percentile for the bilingual immersion program and 21st percentile for the transitional bilingual education program) and vocabulary (16th and 15th percentiles respectively by the seventh grade). Sadly, these levels of performance are typical for low-income Hispanic students in the junior high school years (DeLa Rosa & Maw, 1990).

Mean scores in math were higher: performance was within one-half standard deviation of the national norms. Scores on the Total Language subtest were also well within one-half standard deviation of the national norms:

- In the bilingual immersion program, sixth graders were at the 37th percentile, and seventh graders were at the 39th percentile.
- In transitional bilingual education, sixth graders were at the 30th and seventh graders at the 37th, percentile.

This low level of performance on standardized tests by low-income Latino students, particularly in the areas of reading and vocabulary, is a well-known phenomenon (De La Rosa & Maw, 1990; Garcia, 1991; Haycock & Navarro, 1988).

While the academic differences between the two groups used in this longitudinal comparison were non-significant by the end of the seventh grade, the number of students who entered mainstreamed sixth-grade classrooms was significantly different. Virtually all of the immersion students were in regular classes, while this was true of only two-thirds of the transitional bilingual education students.

The surveys of teachers and parents, as well as interviews with students, revealed positive attitudes toward many aspects of both programs. The most important finding may be the feeling of the immersion teachers that their program did a better job of teaching English—and hence, was more effective in preparing students for later schooling. Over twice as many immersion teachers felt that their program was successful in developing students'

oral English fluency and capacity (74 percent versus 36 percent for the traditional bilingual teachers). Finally, neither the immersion teachers, parents, nor students said that the approach was stressful.

Conclusions

These results indicate that there may be advantages to intensive English-emphasis instruction in the early grades. Well-designed bilingual immersion leads to more rapid, successful, and increased integration of Latino students into the mainstream, with no detrimental effects in any area of achievement for students who experienced this program. These results and the observations of the immersion classrooms conducted by the authors point to certain aspects of the program that have direct relevance for other districts attempting similar types of programs.

The major strengths of the bilingual immersion program are its utilization of contemporary thinking on language acquisition and literacy development and its relatively stress-free approach to the rapid acquisition of English in the early primary grades.

A definite strength of the bilingual immersion program is that it utilizes modern conceptions of second language instruction and language acquisition. Students learn English while listening to interesting stories and discussing them, and while learning mathematics—rather than learning through the relatively sterile contexts of many English-as-a-second-language lessons. In other words, language acquisition is merged with cognitive instruction.

We believe this approach should be seriously considered as districts explore options for instructional strategies for second language students, especially if districts value early entry into the mainstream and early growth of English language competence at both the conversational and conceptual levels. If anything, the research presented here supports flexibility in exploring and researching alternatives to traditional bilingual education approaches.

There appear to be some advantages to the bilingual immersion program that go beyond its current conception and implementation in El Paso schools. The most obvious is that a program such as the bilingual immersion program could in all likelihood be implemented with one bilingual teacher for every three to five classrooms. Using a team-teaching model, this bilingual teacher could teach the Spanish component for all three to five classes, since this component tends to last from 30 to 90 minutes per day. Considering the large shortage of qualified and certified bilingual teachers nationwide, this could be a definite advantage for large urban districts, such as New York or San Diego, that are struggling with the problem of filling bilingual positions. This approach could be equally advantageous for smaller districts that have only one or two bilingual teachers per district, but that have many students requiring some type of second language instruction.

Bilingual Immersion

Introduction and Overview

The purpose of bilingual immersion, an innovative approach to the education of language minority students, is to rapidly introduce language minority students to English in a meaningful fashion during the early years of school. This introduction to English is done sensitively by integrating second language instruction into content area instruction. Thus, English to Speakers of Other Languages (ESOL) instruction is fully *integrated* with reading, language arts, and math instruction, rather than taught as an isolated subject. For the first four years of school, students also receive native language instruction in reading, writing and aspects of Latino culture.

A bilingual immersion pilot program was begun in the El Paso Independent School District in El Paso, Texas, during the 1984-85 school year. Started in eighteen schools that had large numbers of students who had a limited proficiency in English, it has become an alternative program to the traditional bilingual program that has been used in the district for years. Bilingual immersion represents a well-conceived approach that has the potential to be broadly applied as a method of delivering instructional services to language minority students throughout the U.S.

Bilingual immersion also holds great promise for enhancing and reconceptualizing school programs for this group of students. The relative success of the approach argues for an increased role for parent, teacher, and school choice in the selection of instructional models for language minority students.

Potentially, bilingual immersion can integrate language minority students into the mainstream rapidly. Another advantage is that it requires only one bilingual teacher for every three or four classrooms, thus providing a solution to the nationwide shortage of qualified bilingual teachers.

This report is divided into the following four sections.

1. A description of the bilingual immersion program and its conceptual foundation.
2. A presentation of the findings of our longitudinal evaluation of the district's program.
3. A presentation of the findings from surveys and interviews conducted with teachers, parents, and students.
4. A discussion of the implications of our findings for reforming and enhancing services to language minority students throughout the nation.

The Rise of Structured Immersion/ Sheltered English in North America

In the 1980's, several innovative and controversial approaches to second language acquisition emerged. In the first, the well-publicized Canadian immersion approach (Cziko, 1975; Genesee, 1984; Lambert & Tucker, 1972), native-English-speaking students acquired a good command of French rapidly during their early school years. This feat was accomplished by an instructional method that used French to teach all academic subject areas.

Published reports about the Canadian immersion programs suggested that the students acquired French naturally, rather than in the somewhat artificial manner that is typical of most second language instruction. It also appeared that, because French was introduced beginning in the first grade, students learned the new language while they were learning academic subjects such as math or science.

In the 1980's, there were also attempts in the United States to introduce a modified form of structured immersion, also called "Sheltered English," for both Hispanic and Southeast Asian students. Baker (1984) articulated the rationale for this kind of program:

> Language minority students in effect learn English ... as they learn math through English instruction *that is understandable* at their level of English proficiency. In short, practice makes perfect, and English is best learned by using it as much as possible throughout the school day (p. 2, emphasis added).

The results of these programs appeared promising in exploratory research studies (Gersten & Woodward, 1985; Chamot & O'Malley, 1989). There was evidence of enhanced achievement in reading, mathematics, and language arts. Some structured immersion programs during this era included comprehensive interventions in all aspects of instruction in the elementary grades (Gersten, Taylor, Woodward, & White, 1984; Gersten, 1985). Others focused on content area instruction in math, science, and/or in social studies (Chamot & O'Malley, 1989).

The structured immersion approach, however, was not received as positively in the United States as a program for Hispanic students as it had been in Canada for English-speaking students (Castellanos, 1983; Cohen & Swain, 1976; Crawford, 1986; Crawford, 1989; Mackey, 1978). Many Hispanic educational and political activists felt that Hispanic students should be taught the major part of their day in Spanish during the early years of school so that they would not fall behind in academic subjects such as reading, social studies, and mathematics. Once students completed three to five years of native language instruction, the belief was that they would be able to transfer their abilities and skills in these academic areas successfully from Spanish to English. They feared that teaching Hispanic students "prematurely" in English would be detrimental to both their cognitive development and their self-esteem (Cummins, 1981; Crawford, 1989; Moll, Diaz, Lopes, & Estrada, 1980).

Recent Research on the Effectiveness of Structured Immersion and Modified Immersion in the United States: Findings and Controversies

The findings of the widely publicized Aguirre International report on bilingual education programs that was commissioned by the Department of Education (Ramirez, Yuen, Ramey, Pasta, and Billings, 1990) are directly relevant to this research project. Ramirez and his colleagues attempted to evaluate the relative effectiveness of three approaches to the education of language minority students. They labeled these approaches "structured English immersion," "early exit transitional bilingual education," and "late exit transitional bilingual education." Their longitudinal evaluation of these programs included a rich range of measures: (1) academic assessments in both English and Spanish; (2) classroom observations of the language used for instruction; and (3) observations of the instructional strategies utilized in each classroom, such as the number of higher order questions asked and the amount of extended dialogue observed.

The Aguirre study provided a rich description of strengths and weaknesses in current practice and of the extreme diversity of approaches used to teach language minority students. However, like most evaluations of its scope, it had several serious flaws. In spite of these problems, it is worth reviewing several of this study's features, both to clarify its conclusions and policy implications and to highlight the relative strengths of the research design of our longitudinal study of the El Paso program.

In our view, the major problem with the Aguirre International study was the researchers' idiosyncratic definitions of two of the programs they distinguished: early-exit transitional bilingual education and late-exit transitional bilingual education. They defined early-exit transitional bilingual education as a program that had 30 to 60 minutes of native language instruction in kindergarten, first, second, and third grades. They defined late-exit transitional bilingual education as having "a minimum of 40 percent of ... total instructional time in Spanish" (p. 2). In our view, what they call late-exit was really conventional transitional bilingual education as it is practiced in many large urban areas in the United States (e.g., Houston, Los Angeles, El Paso). What they called early-exit appears to be a modified form of English immersion, like the bilingual immersion program in El Paso. Students in what Aguirre International labeled "early-exit transitional bilingual education" spent much of their instructional day in English language instruction, even in kindergarten and first grade. This definitional anomaly is important to keep in mind when discussing the findings of the study.

A second serious problem with the study, as Ramirez and his colleagues noted themselves, is that, while they were able to contrast structured English immersion with what we would call "modified immersion" (and they call early-exit) within the same district, they were unable to compare either of these immersion models to transitional bilingual education within the same district. Thus, their comparisons between transitional bilingual education and immersion are always made across districts, which makes direct comparison highly suspect.

Rossell (1991) observed one additional flaw in the Aguirre study: the fact that many students in the three samples were not assessed as limited-English-proficient *even in kindergarten.* She noted that 70 percent of the immersion students, 49 percent of the modified immersion students, and 48 percent of the transitional bilingual education students were considered to have some proficiency in English even in their first year of school. This is a very different population from that which is typical of bilingual or immersion programs in this country.

Finally, Rossell noted a major flaw in the design of the Aguirre International study. The researchers failed to assess achievement levels of the total and modified immersion students in grades 5 and 6. This is a crucial issue in assessing the lasting effects of instructional programs over time, especially in the area of language acquisition (Gersten et al., 1984).

Descriptive Findings

Ramirez and his associates noted that there was a distinct difference among the three approaches in the amount of English used during the school day. For example, in first grade the mean percent of time in English was 97.3 for structured immersion, 69.1 for modified immersion, and only 32.9 for transitional bilingual education. The small amount of time spent in Spanish in the structured immersion program reflected the occasional use of the students' native language for clarification, a phenomenon that was also noted by Gersten, Taylor, Woodward, and White (1984) in their research.

By the fourth grade, structured immersion and modified immersion students spent almost the entire day in English--99.8 percent and 97.3 percent of their time, respectively. In contrast, transitional bilingual education students were still spending almost half the day in Spanish, with a mean of 55.3 percent for English language instruction.

The Aguirre International study also noted that teachers in all three types of programs tended to ask primarily low-level questions and that "when students do respond, typically they provide only simple information recall statements. Rather than being provided with the opportunity to generate original statements, students are asked to provide simple discrete close[d]-ended... responses" (p. 8). They conclude that in all three programs, the nature of teacher-student dialogue constricted not only language development, but also higher order cognitive abilities. It is interesting to note that an increased use of the native language in the early grades did not increase the percentage of students who asked questions or provided comments, nor did it increase the amount of discussion (Rossell, 1991). Rossell also notes that increased use of the native language did not increase the amount of student engagement.

Evaluation of Student Academic Outcomes

Although the Aguirre International researchers were unable to contrast the relative effectiveness of transitional bilingual education with either structured English immersion or modified English immersion programs, they were able to contrast total immersion programs with modified immersion programs. They found essentially no differences between these two programs in all measured aspects of third grade achievement: mathematics, language, and reading.

Because of the limitations of comparing data from very different school districts and different populations, the authors realized they could not seriously compare the relative effectiveness of transitional bilingual education to either of the immersion programs. They observed, "It is not possible to compare these alternative instructional programs, nor is it possible to disentangle the effects of district and school from treatment effects" (p. 20).

The authors noted that there were great variations among transitional bilingual education programs in the five sites that were implementing them. Perhaps their most interesting finding is that the one district that abruptly "transitioned" students from virtually all-Spanish to all-English instruction tended to have the worst academic results.

The authors found that students in transitional bilingual education programs had a higher rate of growth in English language achievement during grades 4, 5, and 6. This finding, which has been noted previously by other researchers, is easily explained. Students tend to show the greatest growth during their first few years of English language instruction, partly because they are in the beginning stages of making sense out of items on academic criterion measures. (See Baker and de Kanter [1983] for a discussion of this issue.)

Ramirez and his fellow researchers noted no differences in achievement between transitional bilingual education and immersion students, but continually remind the reader that their design did not allow them to make any valid comparisons. Nonetheless, the primary message of the Aguirre International study may be, as Rossell titles her critique of it, that "nothing matters." That is, none of the three approaches was shown to be superior.

Despite its methodological flaws and limitations, the major impact of the Aguirre International study has been to encourage a serious reexamination of the notion of transitional bilingual education as "the answer" for the education of language minority students.

The Bilingual Immersion Program in El Paso

Background

Several factors contributed to the conception and implementation of the bilingual immersion program in the El Paso Independent School District. First and foremost was a belief by teachers, district administrators, and members of the Latino community in El Paso that

bilingual education, as it was being implemented in the early 1980's, failed to capitalize on students' burgeoning knowledge of the English language.

Many of the limited-English-proficient students in El Paso schools, though hardly fluent in English, quickly acquired the rudiments of conversational English. After all, El Paso is a bilingual city, and its students learn English through TV, radio, through what they hear in the community and at school, and through the English for Speakers of Other Languages (ESOL) lessons that are part of the transitional bilingual education (TBE) program. Also, because El Paso is a bilingual/bicultural city, parents and teachers do not fear that an emphasis on English in the schools will pose a threat to students' ethnic identity and self-concept, as some theorists and educators have feared (Cummins, 1986; Hernandez-Chavez, 1984).

For the first three or four years in school, most transitional bilingual education programs, even the ones used in many El Paso schools, underutilize the students' growing understanding of the English language. Academic content area instruction (reading, math, social studies, language arts) continues to be conducted in Spanish, and, typically, the only portion of the school day devoted to English language development is the ESOL lesson. The major rationale behind this model has been that students needed to be exposed to academic content in a comprehensible form (that is, in Spanish), or they would fall behind in their academic studies.

However, many teachers in El Paso began to wonder if reading, math, and social studies instruction could be provided to these students in English *in a meaningful, comprehensible fashion.* If it were possible to do this, English language acquisition could be accelerated without diminishing the development of students' reading, writing and mathematical skills. Students would then be able to enter integrated mainstream classes at an earlier age.

The reported success of structured immersion programs in Canada led some of the teachers and curriculum specialists in El Paso to develop a pilot program and then later to adopt this approach for Latino students in their district. Some staff members and administrators felt that such a program could have a positive instructional impact and still remain sensitive to the consideration that some parents and many educators wanted students to receive some portion of their instruction in Spanish. This thinking led to the creation and large-scale implementation of bilingual immersion by the district.

Barrera (1984), a noted reading and second language researcher, was one of the first to articulate some of the underpinnings of contemporary notions of immersion instruction. Based on her extensive work with language minority students, she concluded that it is not always necessary for instruction in English reading to follow instruction in Spanish reading, as many bilingual educators believe. She wrote:

> ... the beginning of second-language reading can be a natural, learner-initiated, and learner-controlled occurrence when children approach reading as a desirable, useful, and meaningful activity ... [S]econd-language reading can commence soon after native-language reading begins, or develop virtually alongside it, as long as the learner is making sense of the written language he or she encounters. (p. 170).

Krashen (1983) has also argued that it is optimal for language minority students to begin reading in English as soon as they know enough of the second language to derive meaning from the text. The use of English language arts and reading instruction to foster the rapid acquisition of English language skills on both a conversational and conceptual basis was a cornerstone in the evolution of bilingual immersion. The conceptualizations of Barrera (1984), Krashen (1983), and Cummins (1986) have played a role in the evolution of the bilingual immersion model in El Paso.

The Bilingual Immersion Program

The convergence of these trends led to the El Paso bilingual immersion program (BIP). Bilingual immersion differs from the structured immersion programs introduced in the United States in the 1980's in that it includes a native language component in each of the first four years of school. The length of time allocated to native language instruction ranges from 30 to 90 minutes per day.

Bilingual immersion is built upon many of the same concepts of language acquisition as other approaches towards bilingual education. In particular, the model addresses the need to:

- provide continuous comprehensible instruction,
- nurture both the child's self-esteem and respect for her or his native language and culture, and
- build upon the strength of the child's first language for certain aspects of cognitive development (Diaz, Moll, & Mehan, 1986; Moll, 1988; Moll, Estrada, Diaz, & Lopes, 1980).

But bilingual immersion differs in many ways from transitional bilingual education. With bilingual immersion, most of the students' instructional day is conducted in English from the first day of first grade. The important fact about the instruction is that it is *comprehensible.* Bilingual immersion is structured and designed so that students *understand* what they are taught, so that their interaction with the English language is meaningful from the very first day.

An Example of Integration in Bilingual Immersion

Bilingual education advocates commonly accuse immersion programs of inherently belittling the language of minority children. On the contrary, in bilingual immersion, a child's home language is never treated in a derogatory or disrespectful fashion. One example of this comes from a first grade classroom that the researchers observed (Woodward & Gersten, 1991; Gersten, 1991). During the English portion of the day, the teacher always spoke in English. If a child responded in Spanish, the teacher expressed no criticism, implicit or explicit. However, she always spoke to the children in English, using visuals, repetitions, and gestures to help clarify the concepts. This teacher clearly exemplified the principles of sheltered English/structured immersion approaches—teaching English while teaching reading. She never used simultaneous translation, an approach that is likely to decrease the rate of English acquisition (Legarreta, 1979).

It is interesting that even during the second month of the first school year the students in the bilingual immersion program virtually never use Spanish during their math lessons, where the vocabulary is well controlled. They do occasionally use Spanish during the language arts/reading segment of their lessons, and the teachers invariably use this as an occasion for development of English language skill.

During free reading time and journal writing time, students are free to read and write in either English or Spanish. Both languages are accepted and encouraged. This is a typical example of how bilingual immersion uses—and respects—both the native language and the second language. Additional classroom observations conducted by Schneider (1990) have shown how this plays out in an interesting and revealing way. In transitional bilingual education classrooms, students rarely use English when conversing with each other, even at advanced levels. On the other hand, in bilingual immersion, students often use English phrases or even whole sentences in English when speaking to one another. The back-and-forth movement between the two languages is fluid and comfortable for the students.

Purpose of the Study

The evaluation research reported in this monograph compares the lasting effects of transitional bilingual education and bilingual immersion, two very different approaches to second language instruction that are used within the El Paso district. This longitudinal study involved students in grades 4 through 7, a time period when students are proficient enough in English to be assessed on standardized achievement tests in English.

Unlike the Aguirre International study (1990), we compared an immersion approach to a transitional bilingual education approach *within the same school district,* where resources, length of the school year, class size, and other instructionally relevant variables are similar. In addition, unlike the students in the Ramirez sample, all the students in our study began school as limited-English proficient.

This study augmented achievement data with data from teacher and parent questionnaires and student interviews. Analyses also document the rate at which students from each program enter mainstream English-language classrooms.

Description of the Two Programs for Language Minority Students

Bilingual Immersion

The bilingual immersion program in El Paso uses a network of instructional strategies in order to give students multiple opportunities to experience language, to express their ideas in English, and to learn English while they are engaged in meaningful, cognitively complex activities. The program introduces children to large "units" of language, especially stories, as well as to authentic language experiences (Barrera, 1984; Cummins, 1986; Goodman, 1989). These experiences can include publishing their own stories, critiquing the writing of fellow students, and using ideas and concepts from books and novels that are read in class as a basis for expressive writing. If the program is properly implemented, all of these strategies, activities, and approaches may be placed under the canopy of the whole language or literature-based approach to reading/language arts instruction.

Bilingual immersion differs from total immersion in that a native language (Spanish) component plays an important role in grades 1 through 4. This component lasts approximately 90 minutes a day in the first grade and is gradually phased down to 30 minutes in the fourth grade. The objective of this component is to develop concepts, literacy, cognition, and critical thinking skills in Spanish. During this period, instruction and student-teacher interaction are entirely in Spanish. The remainder of the day's instruction is conducted in English.

Two common immersion instructional methodologies are used:

- whole language/natural language methodologies
- sheltered English methodology

Whole language/natural language methodology. Whole language is the core methodology underlying language arts, reading, writing, and ESOL instruction. The goal of this method, when it is used to teach English to limited-English-proficient students, is to sensitively, but consistently, teach the students how to speak and express their ideas in English and to better understand concepts in this second language. In this sense, the program follows a structured immersion (Genesee, 1984; Gersten & Woodward, 1985) or sheltered English orientation toward the rapid acquisition of a second language.

English reading/language arts is taught for 90 minutes to 2 hours per day, depending on the grade level of the students. Teachers use their own variant of the natural approach

(Krashen, 1984) to create a stress-free, "natural" environment for acquiring English. Reading and writing are fostered through the use of the whole language approach by providing a learning environment that stresses:

- reading of high quality children's literature
- writing as a form of personal expression
- dialogue (in English) about issues generated in journals and issues raised in stories read

In the immersion program, it is common for children to listen to stories daily, to engage in structured dialogue about characters' motives in the stories read, and to participate in brainstorming sessions before writing. They also learn to read and write simultaneously by publishing group and individual books and by keeping a daily journal.

Bilingual immersion's use of high quality children's literature, especially books with vivid pictures and rhymes, has been consistently recommended as an ideal way to augment and enhance ESOL instruction (Barrera, 1984; Elley & Mangubhai, 1983). Reading is viewed as a process of anticipation, prediction, selection, confirmation, and self-correction in an effort to gain meaning.

To enhance comprehension and to facilitate and stimulate English language production, teachers use a range of directed reading activities and cognitive strategies (Woodward & Gersten, 1991; Harris & Pressley, 1991). To elicit student responses, teachers ask a range of questions about the story. Students learn to distinguish between major and minor events and to remember the details of a story. Through the use of cues and prediction strategies, students' comprehension is enhanced.

Teachers use story maps (Gersten and Dimino, in press; Reyes & Molnar, 1991) and other visual organizers to serve as a basis for discussion and cooperative learning groups. Repetition or retelling of the story is also used to help children internalize an organizational framework for stories. Through a process of group brainstorming and discussion, students verbalize their thoughts and ideas about the novels and trade books they have read in English. Products of brainstorming sessions often serve as a basis for English language writing assignments (Woodward & Gersten, 1992).

The ideas generated during brainstorming sessions are often classified, described, and organized by the teacher, actions that assist the students to comprehend English language concepts (Gersten, 1991). This has been found to be a particularly helpful technique for lower-performing language minority students (Reyes & Molner, 1991). Again, discussion of literature serves as the basis for dialogue in English about the stories that have been read, about personal reactions to the stories, and about characters' emotions and feelings.

This approach (Krashen, 1984; Barrera, 1984) is based on the assumption that a second language can be learned most easily by learning it the same way the first one was learned. This means that the second language should not be taught directly, but should be acquired through comprehensible input in a low-anxiety environment. For example, in the pre-production stage (typically early first grade), students are not required to speak, and the emphasis is on recognizing simple words and commands. In the next stage, early production, students are asked questions that can be answered with a single word or phrase. Conversation is not expected until the later stages. Because the natural approach creates a low-anxiety environment for learning, the process is both meaningful and enjoyable.

Bilingual immersion as a sheltered English approach. The term "sheltered" is used to indicate that students are grouped by language ability and that special strategies are used to enable students to learn academic material in the second language. Although it is acceptable for students in a sheltered class to use Spanish as a means of developing con-

cepts in the beginning level of the program, sheltered classes are generally conducted in English.

During the English language portion of the day, students in the immersion program are never criticized for speaking in Spanish, either to their peers or to the teacher. The teacher, however, always speaks English during this part of the day (80 to 95 percent of the typical school day). If the Spanish language responses alert the teacher to a problem, he or she will use a variety of techniques—concrete objects, gestures, multiple explanations in English—to explain or clarify the concept in English (Schneider, 1990; Woodward & Gersten, 1991; Gersten, 1991).

"Total physical response" is an instructional strategy that is commonly used in the early phases of sheltered English instruction to give comprehensible input to students who are in the very beginning stage of learning a new language. With this approach, teachers introduce students to simple commands and basic vocabulary words by a process of modeling by the teacher and mimicry by the students. For example, a teacher will point to a place in the classroom, instruct a student to move to that point, and model that behavior. Different students are then given the instruction to do the same thing. It is not necessary that students understand every word of the instruction; they need only understand enough to be able to carry out the request. This approach, particularly at first, requires no oral responses from students. Students understand a great deal before they are required to speak. This is a very effective way to teach beginning students "survival" concepts and words.

Transitional Bilingual Education

El Paso also offers a transitional bilingual education (TBE) program, which began as a pilot program in 1970 (Teschner, 1988) and was expanded in 1977 to include all limited English-proficient students. The transitional bilingual education program serves as a comparison program for this evaluation.

From 1977 to 1984, the El Paso Independent School District had one of the largest transitional bilingual education programs in Texas and in the United States. The program has been used in nearly 40 schools each year, and it has involved more than 500 teachers and numerous support personnel.

El Paso's transitional bilingual education program has the following characteristics:

1. Basic concepts are taught in the student's primary language.
2. Basic skills and strategies for comprehending, speaking, reading, and writing are also developed in the student's primary language.
3. Subject matter and concepts are taught in the student's primary language.
4. Subject matter and concepts are taught in the English language in a gradual fashion, always in such a way so that the input is comprehensible to the student (Krashen, 1984).
5. Attention is given to instilling in the student confidence, self assurance, and a positive identity with his or her cultural heritage.

This means that students are surrounded by Spanish for most of the day in the beginning levels. They learn to read in Spanish, and they receive instruction in Spanish in the content areas of science, mathematics and social studies. Students in the first grade spend 60 minutes a day receiving English instruction and 90 minutes in the second grade. When

students' English language abilities have developed to a point where the teacher feels they can understand texts in English, formal English reading instruction and content area instruction begins. Finally, when students reach a specified criteria on standardized achievement tests, they exit the program. Typically, the criterion is the 40th percentile in Reading and Language on the ITBS but, depending on a school committee's judgement of a student's English proficiency, it can be as low as the 23rd percentile.

Longitudinal Evaluation Research

Overview

Data were collected between 1985 and 1991 on more than 350 limited-English proficient students in ten elementary schools. Five of the elementary schools used the bilingual immersion model described above; the other five employed the district's traditional bilingual education approach.

A detailed longitudinal analysis was conducted on approximately 230 students who took the Iowa Test of Basic Skills (ITBS) in the areas of language, reading, mathematics, and vocabulary. Only those students who took the test (or subtest) for four consecutive years (from grade 4 through grade 7) were included in this longitudinal analysis. Analyses were also conducted in the spring of 1990 on the percentage of students who had entered the mainstream by sixth grade.

Purpose of the Longitudinal Research

The major purpose of this research was to compare the relative patterns of achievement on the ITBS in grades 4, 5, 6, and 7. Prior to the fourth grade, comparisons would have been unfair, since students spent very different amounts of time in English language instruction. However, beginning in grade 4, the district routinely tested all second language students, except for recent immigrants, on the ITBS in English.

Analysis of achievement from grades 4 to 7 allows for a long-term look at differences in academic performance between students who were taught with the two different bilingual education programs. Bilingual immersion emphasizes the early acquisition of English through content area instruction. Transitional bilingual education stresses content area instruction in Spanish during the primary grades, on the theory that students will be able to transfer skills and knowledge into English during the later elementary and middle school years.

This analysis does not constitute a formal test of the effectiveness or validity of either approach. Clearly, the actual implementation of either method in classrooms is not completely faithful to its theoretical description. However, the size of our sample and the span of our longitudinal evaluation do allow for an exploration of the relative impact of the two approaches.

Subjects and Sample

The sample included only those limited-English proficient students who began one of the two instructional programs in first grade and continued in the program until they were deemed eligible for mainstream instruction. Ten schools with large proportions of limited-English-proficient students were involved; five of the schools implemented bilingual immersion, and five implemented transitional bilingual education. The longitudinal study of sustained effects included only those students who remained in the district until seventh grade and for whom ITBS scores for grades 4 through 7 were available.

The two samples were similar demographically. In the bilingual immersion sample, 92.1 percent of the students received a free or reduced-cost lunch. This was comparable to the 94.2 percent of the transitional bilingual education students who received a free lunch.

Assessment of English Language Proficiency

The El Paso school district tested each student upon entry into the first grade on a locally developed measure of English and Spanish language proficiency, the Oral Language Dominance Measure (OLDM). Scores on the measures range from 1 to 5. A low score of 1 indicates virtually no fluency in English; a score of 3 indicates minimal fluency; and a high score of 5 indicates good fluency. Mean scores on the English OLDM were 1.24 for the immersion sample and 1.08 for the transitional bilingual education sample; the standard deviations were .63 and .42, respectively. Only .5 percent of the students in each sample were classified as demonstrating more than the most rudimentary proficiency in English.

Because the OLDM indicated that there was a slight, though insignificant, difference favoring the immersion group, an analysis of covariance was utilized in all subsequent analyses to control for the initial difference. Nevertheless, it is important to note that virtually all students in both the bilingual immersion (94 percent) and transitional bilingual education (97.5 percent) samples received scores of 1 or 2 (extremely limited English language proficiency) upon entry into school.

Sample Attrition

In longitudinal studies, the potential effects of bias due to the loss of subjects over an extended period of study must be considered. This sample attrition may result from a number of factors, particularly grade retention. Sample attrition is not necessarily a problem unless it occurs in a systematic way that affects the comparability of the two groups of students.

Grade retention. The two samples included all students who began either the bilingual immersion program or the transitional bilingual education program in kindergarten or first grade. However, we noted that by the sixth grade some students had been retained in earlier grades. Data were collected in the winter of 1990 on the grade level of all students in the longitudinal sample. By normal patterns of promotion, these students should all have been sixth graders. But, as the data in Table 2.1 illustrates, 9 per cent of the students in each sample were in the fifth grade because they had been retained. One percent of the students in each sample were in the seventh grade due to early promotion.

Because the percentages were identical in the two programs and because 90 percent of the relevant samples progressed through the first six years of school at the normal rate, we decided to include only the sixth graders in the final analyses. The "retained" students took a different level of the ITBS; thus it would have been impossible to aggregate their scores with those of the sixth graders. Attempts to adjust statistically for students taking different levels of a test have proved to be inaccurate (Horst, Tallmadge, & Wood, 1975). Since there is no confound due to grade retention, analysis of only the non-retained sample seemed to be the most appropriate technique.

Table 2.1

Percent of Students in Longitudinal Sample Retained and Accelerated -- Winter, 1990

	Retained	*At Grade Level*	*Accelerated*
BIP (N=134)	9%	90%	1%
Transitional Bilingual (N=145)	9%	90%	1%

Sample attrition due to other factors. School districts in the United States that are near the border of Mexico often experience a high rate of student mobility. It is not uncommon for some students to begin school in one location and to move to another school within the district or to return to Mexico for a period of time

during their elementary school years.

A series of t-tests were conducted to determine whether there were significant differences in academic ability between those students who remained in each program for the four years of this longitudinal analysis (grades 4 through 7) and those who left the district between fourth and seventh grades before 1991. Students within each program were compared (i.e., those who had test scores from grades 4 to 7 and those who had entered in grade 4 but had left the district by seventh grade). Eighteen students in the bilingual immersion sample and thirty-six students in the transitional bilingual program were considered "leavers." t-tests comparing "leavers" to those remaining within each program indicated no significant differences in fourth grade ability in reading. These data indicate that the samples of remaining students are representative and that attrition did not have a differential effect on the two samples.

Results

Academic Performance from Fourth to Seventh Grade on ITBS

The test results are presented in the four tables below. An analysis of covariance was performed on ITBS scores at each grade level for language, reading, math, and vocabulary. The OLDM English scores that students received upon entry into school were used as the covariate. Normal curve equivalent (NCE) scores were utilized, since they are the best metric for analysis (Horst, Tallmadge, & Wood, 1975). The NCE scores were then converted to percentile ranks.

The data show an interesting pattern. In the fourth grade, immersion students demonstrated superior performance in *all aspects* of academic performance. But by the seventh grade, no significant differences were found in any aspect of academic performance.

The effects of the programs on academic performance are most evident in language. Table 2.2 indicates significant differences between immersion students and traditional bilingual students for grades 4, 5, and 6. It is only by the seventh grade that the differences dissipate. A bar chart comparing the effects of the two is presented as Figure 2.1.

Table 2.2

ITBS Total Language NCE Scores

	Bilingual Immersion Program (N=111)			Transitional Bilingual Education (N=117)				
Grade	*Mean*[1]	*%ile*	*SD*	*Mean*[1]	*%ile*	*SD*	*F*	*p*
4	46.52	44	15.40	36.12	26	13.97	27.37	.001
5	43.97	39	14.73	38.52	30	14.20	8.03	.005
6	43.19	37	15.09	39.22	30	15.55	3.96	.050
7	44.36	39	16.91	43.23	37	15.74	.24	NS

[1]*Adjusted using English language proficiency scores as covariates*

Figure 2.1 - ITBS Total Language

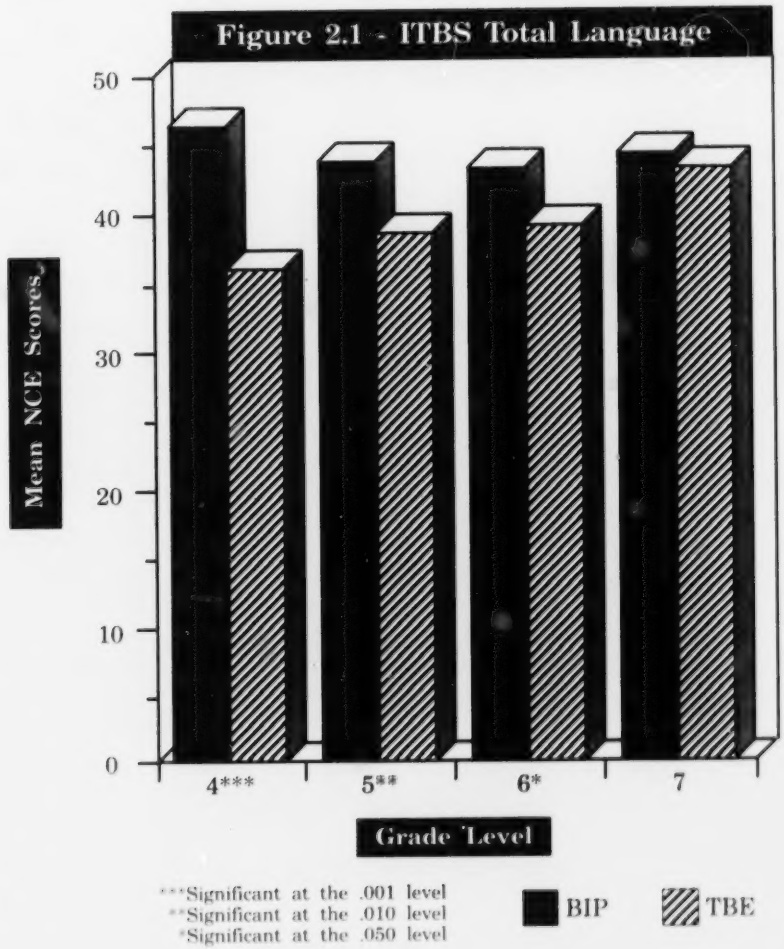


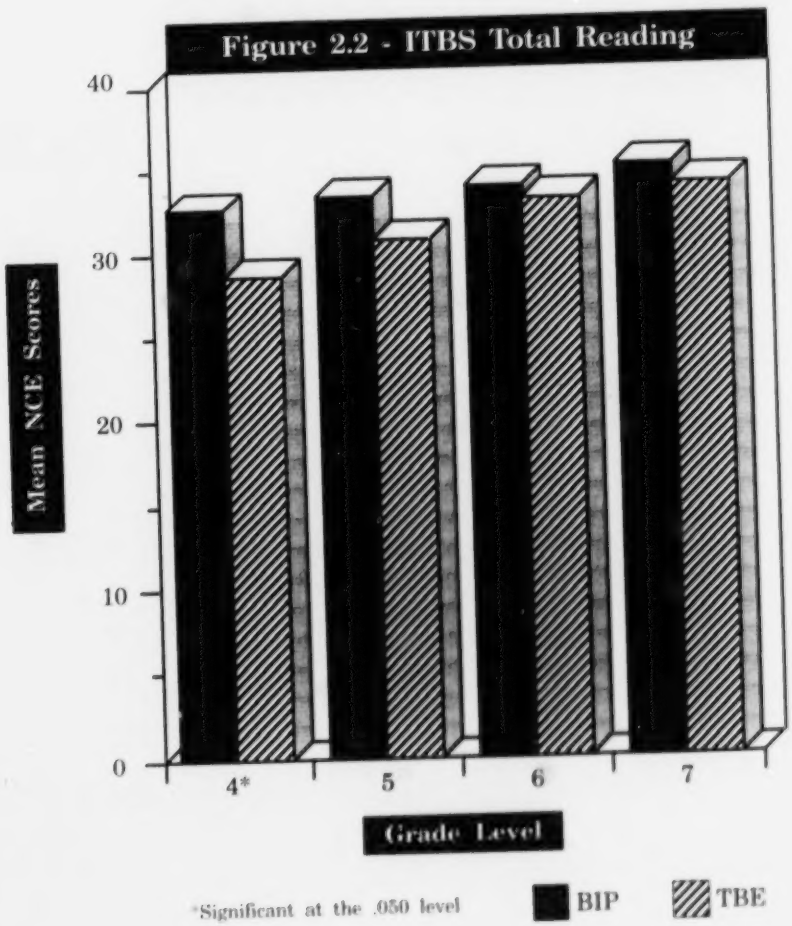
Table 2.3

ITBS Total Reading NCE Scores

	Bilingual Immersion Program (N=114)			Transitional Bilingual Education (N=119)				
Grade	*Mean*[1]	*%ile*	*SD*	*Mean*[1]	*%ile*	*SD*	*F*	*p*
4	32.21	20	12.71	28.30	15	2.67	4.92	.03
5	33.01	21	12.27	30.47	17	14.12	2.20	.14
6	33.59	23	13.60	32.79	21	14.63	0.13	NS
7	34.65	24	14.22	33.49	21	14.68	0.49	NS

[1]*Adjusted using English language proficiency scores as covariates*

The pattern is less dramatic for reading scores. Statistically significant differences appear in grade 4, and differences approach statistical significance in grade 5 (p=.14). The differences are not significant in grades 6 and 7. These results are presented in Table 2.3 and Figure 2.2.



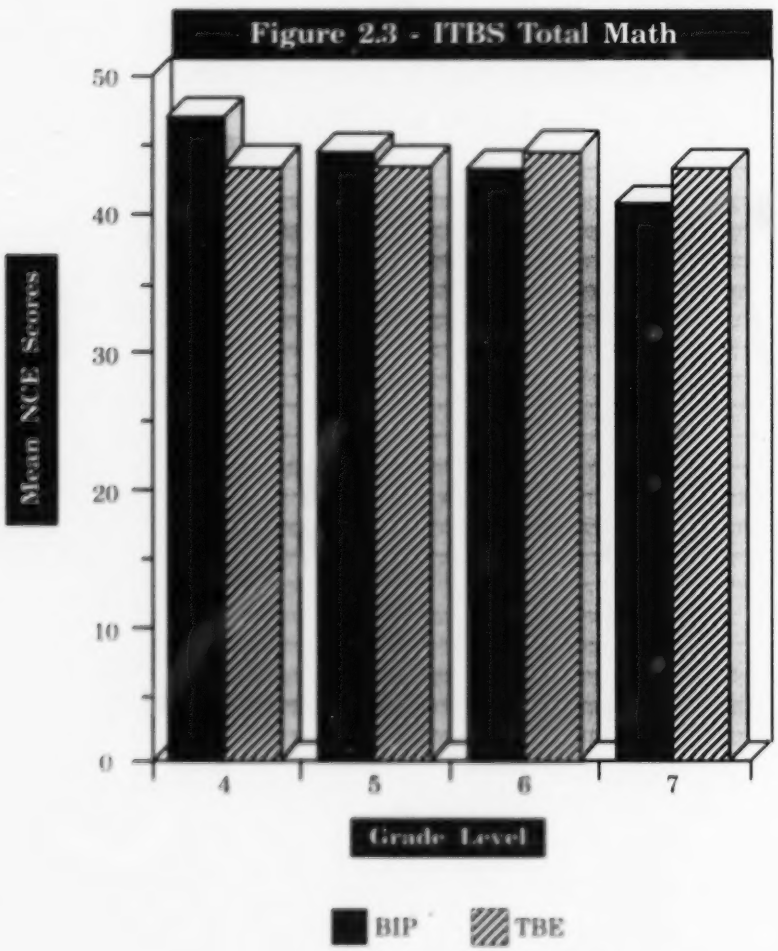
Mathematics is one area that is less likely to be affected by the different language programs in the district. The test results presented in Table 2.4 and Figure 2.3 bear this out. There are non-significant differences between the immersion and traditional bilingual students over grades 4 through 7. If anything, the pattern is irregular, shifting from one that favors the immersion students in grade 4 to one supporting the traditional bilingual students by grade 7. There is little in the structure or in the interventions of either program that explains these findings.

Table 2.4

ITBS Total Math NCE Scores

	Bilingual Immersion Program (N=109)			Transitional Bilingual Education (N = 114)				
Grade	*Mean*[1]	*%ile*	*SD*	*Mean*[1]	*%ile*	*SD*	*F*	*p*
4	46.84	44	17.20	43.48	39	13.44	2.4	NS
5	44.18	39	16.73	43.22	37	18.17	0.2	NS
6	43.03	37	14.07	44.30	39	15.69	0.22	NS
7	40.51	33	15.44	43.31	37	14.13	2.01	NS

[1]*Adjusted using English language proficiency scores as covariates*



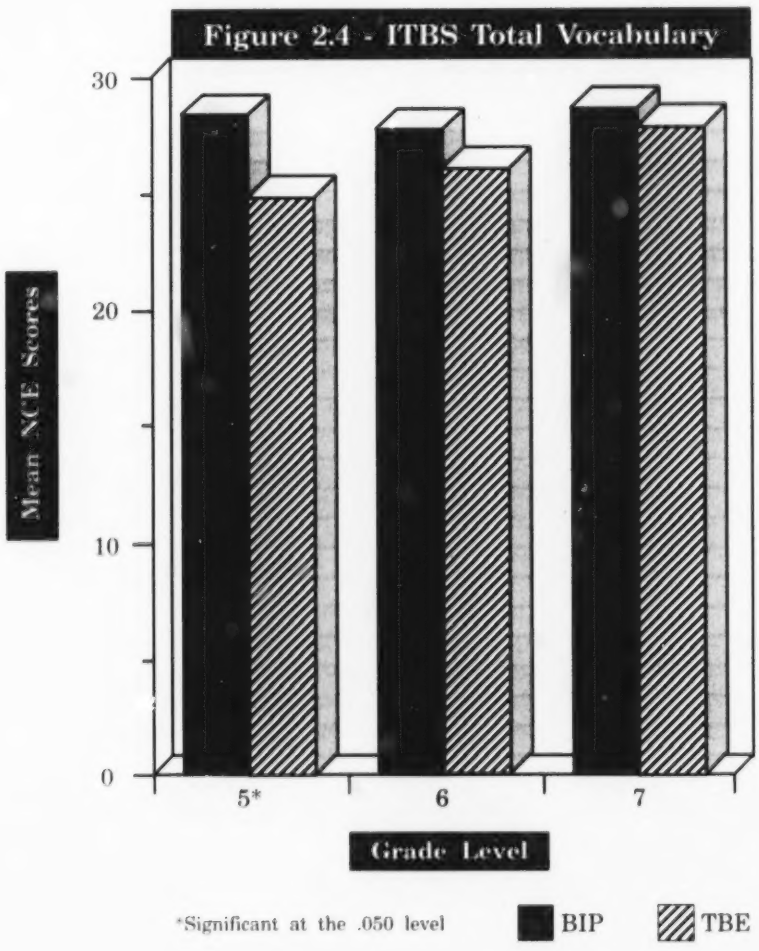
Finally, differences between the two groups in vocabulary performance were similar to the pattern in reading. Results significantly favor the immersion students in grade 5, with differences dissipating by grades 6 and 7. (ITBS data were not available for grade 4.) The comparative results appear in Table 2.5 and Figure 2.4.

Table 2.5

ITBS Total Vocabulary NCE Scores[2]

	Bilingual Immersion Program (N=114)			Transitional Bilingual Education (N=122)				
Grade	*Mean[1]*	*%ile*	*SD*	*Mean[1]*	*%ile*	*SD*	*F*	*p*
5	28.27	15	12.41	**24.79**	12	**13.22**	4.25	**.04**
6	27.65	15	13.58	**25.96**	13	**13.33**	.882	**NS**
7	28.63	16	14.78	**27.91**	15	**14.62**	.17	**NS**

[1]Adjusted using English language proficiency scores as covariates
[2]Grade 4 not available



In summary, these results indicate significant short-term benefits from the immersion approach in reading and language. By grade seven, however, there is no evidence to support the superiority of a transitional bilingual model over an immersion model, nor is there clear longitudinal evidence to support the superiority of an immersion model over transitional bilingual education.

The findings from this exploratory longitudinal research are limited by numerous factors:

- the lack of measures of program implementation,
- the narrowness of the range of skills tested on the ITBS,
- and the problems that second language students often experience with standardized tests such as this (Garcia, 1991).

On the other hand, the conditions under which both bilingual immersion and transitional bilingual education are implemented in El Paso do reflect the realities of typical programs for second language students.

It is important to note that in El Paso there is a growing enthusiasm for the bilingual immersion approach by the teachers. Another important factor to keep in mind is that few parents, teachers, or students reported experiencing high levels of stress with the immersion approach. These subjective impressions are discussed in the next chapter.

Entrance into the Mainstream

The immersion program was designed to increase students' exposure to English, and hence facilitate early integration of these students into fully English-speaking classrooms. The program tried to place students into these classrooms at the end of fourth grade, unless in the teacher's judgement the student was not ready.

In the spring of 1990, when students in the longitudinal sample were in sixth grade, data were collected on placement. All students in the sample had completed at least five years of either bilingual immersion or transitional bilingual education. Only 1 percent of the bilingual immersion students were still in bilingual programs, whereas 35 percent of transitional bilingual students remained in bilingual programs.

The results are presented in Table 2.6 below:

Table 2.6

Placement of Students in Grade 6 By Program

	Bilingual Immersion (N=120)	Transitional Bilingual (N=131)
Regular Class	**99%**	65%
Bilingual	**1%**	35%

These results are statistically significant ($\chi 2 = 46.3$; $p<.001$) and demonstrate that, by the sixth grade, approximately one in three of the transitional bilingual education students is still in a bilingual program, whereas virtually all the immersion students are in full English-speaking classrooms. These results indicate that the immersion program does place students in English-speaking classrooms more rapidly, as intended.

Surveys and Interviews With Teachers, Parents and Students

Teachers' Perceptions of the Two Programs: Questionnaire Survey

The relative success of these two programs must be judged not only by student achievement, but also by teachers' perceptions of the instructional approaches and by both students' and parents' degree of satisfaction with the programs. This section discusses this facet of the research.

Subjects and Sampling

In the spring of 1990, a questionnaire was sent to all transitional bilingual education and bilingual immersion teachers in grades one through six in the entire district. The return rate for the questionnaires was reasonably high. One hundred seventy-three transitional bilingual education teachers (56 percent) and 134 bilingual immersion teachers (52 percent) returned questionnaires. The number and length of the comments and responses to open-ended questions indicated that teachers had a high degree of interest in the issues addressed.

All teachers in both programs were certified bilingual teachers. The mean number of years of experience in teaching second language students was comparable for the two groups: for the bilingual immersion respondents, seven years; for transitional bilingual education teachers, eight. Approximately three-fourths of the teachers in both programs had at least five years of experience teaching second language students. Table 3.1 below displays a breakdown of the grade levels taught by the respondents.

Table 3.1

Grade Levels Taught by Respondents

Grade	Bilingual Immersion	Transitional Bilingual Education
K	3	3
1	32	33
2	29	42
3	28	35
4	29	28
5	11	22
6	1	10
Total	**134**	**173**

Results

Likert Scale Survey Items

Teachers were asked to respond to statements about their program on a three-point scale on which 3 equalled "agree," 2 equalled "undecided," and 1 indicated "disagree." Several statements were identical on both questionnaires; two items were unique to each program.

Table 3.2 presents data from the Likert scale items for all of the teachers who returned the questionnaire.

Table 3.2

Responses to Likert-Scale Teacher Questionnaire Items

	BIP Teachers (N=134)			TBE Teachers (N=173)			
Questions	*Disagree*	*Neutral*	*Agree*	*Disagree*	*Neutral*	*Agree*	χ^2
Most students will succeed in the regular program after they complete the specialized program.	9%	18%	73%	30%	25%	45%	27.3***
The program successfully develops students' oral English skills.	10%	16%	74%	38%	26%	36%	42.0***
The program motivates students to learn English.	9%	12%	79%	43%	22%	35%	43.4***
The program develops and maintains students' Spanish language skills.	6%	16%	78%	11%	17%	72%	2.6
The program motivates students to read and enjoy stories.	8%	12%	80%	23%	29%	48%	32.4***
Thematic units were regularly used in my classroom this year.	14%	23%	63%	34%	35%	31%	25.3***
The program successfully develops students' grammar, punctuation and spelling skills.	16%	26%	58%	24%	20%	56%	3.3*

*$p < .05$ ***$p < .001$

Responses from teachers in the two programs differed significantly on many items. Perhaps the most important difference is in the teachers' feelings about whether students could succeed in the mainstream classroom after completing the program. Of the bilingual immersion teachers, 73 percent felt their students would succeed, whereas only 45 percent of the transitional bilingual education teachers felt their students would succeed in subsequent years. In other words, over half of the transitional bilingual education teachers felt that their program was not sufficient to prepare students to succeed in subsequent years. This difference was significant at the .001 level.

Of the bilingual immersion teachers, 74 percent felt their program was successful in developing students' oral English fluency and capacity; 79 percent felt the immersion

program motivated students to learn English. Only 36 percent of the transitional bilingual education teachers felt their program was successful in developing English language proficiency, and a similar proportion (35 percent) indicated that the program motivated students to learn English. These results suggest that two thirds of the teachers clearly question whether the 30- to 45-minute ESOL segment in the current transitional bilingual education program is adequate for stimulating students to acquire English. Both these differences were significant at the .001 level.

There was a strong, significant difference favoring bilingual immersion in the extent to which teachers believe that the program motivates students to read and enjoy stories (item 5); $p < .001$. Teachers in bilingual immersion reported more frequent use of thematic units (item 6), a core component of the whole language approach embedded in bilingual immersion; $p < .001$. The bilingual immersion teachers also had significantly better feelings about their program's ability to develop students' grammar, spelling, and punctuation competencies and abilities successfully; $p < .05$.

There was only one item on which differences were not significant--item 4: Seventy-two percent of the transitional bilingual education teachers and 78 percent of the bilingual immersion teachers agreed that their programs develop and maintain students' Spanish language skills. These similarities are important to note because the programs differ widely in the portion of the day that is conducted in Spanish.

This is an instance, in fact, in which the lack of a significant difference may actually be interpreted as an argument in favor of bilingual immersion. Even though students in the immersion program spend a far smaller percentage of time being taught in Spanish, most teachers believe that they still develop and maintain Spanish language skills.

Table 3.3 presents the results of questionnaire items specific to teachers from each program.

Table 3.3

Responses to Teacher Questionnaire Items Unique to Each Program

	Responses from BIP Teachers (N=134)			Response from TBE Teachers (N=173)		
Questions	*Disagree*	*Neutral*	*Agree*	*Disagree*	*Neutral*	*Agree*
BIP is successful in teaching children to read in English.	10%	21%	69%			
TBE is successful in teaching children to read in Spanish.				8%	13%	79%
Most students in the TBE program successfully transfer to reading English.				32%	23%	45%
Students in the BIP program benefit from being taught the content areas in English.	4%	10%	86%			

Though a majority of teachers in both programs felt that their program successfully taught children to read, it is important to keep in mind that for this item teachers are talking about different competencies--English language reading in the case of bilingual immersion and Spanish language reading in the case of transitional bilingual education. Ten percent more transitional bilingual education teachers (79 percent) expressed this confidence than bilingual immersion teachers (69 percent).

Open-Ended Questions

The bilingual immersion program. Teachers were also asked to respond to several open-ended questions. These questions were identical for both programs. The first question asked teachers what they thought was the greatest strength of their program. When asked to describe the single greatest strength of the program, 32 teachers (24 percent) in the bilingual immersion program mentioned rapid growth in the acquisition of English. They also cited the creative methods used to teach English, including the use of English in all content areas (including math) from grade one, and the fact that the program "surrounds students with English" throughout the day.

Twenty-nine teachers (22 percent) said that the use of the whole language or a literature-based approach was the program's greatest strength because they felt that this approach built students' English language vocabulary in a meaningful way and provided teachers with a good deal of flexibility to adapt instruction to students' needs across different subjects. Eleven others (8 percent) cited the program's flexibility as its greatest strength, stressing that it allows teachers to integrate all subject areas and adapt the curriculum for the needs of different children.

Twenty-one teachers (16 percent) mentioned the 30- to 90-minute Spanish language component as bilingual immersion's greatest strength. They said the use of Spanish fostered students' self-esteem, kept the children from being intimidated, and built a strong foundation for acquiring English.

Some typical comments follow:

> "Students are more exposed to the English language than in traditional bilingual education. My students learn to read both English and Spanish."
>
> "Students get a chance to express themselves in English. Most of them notice improvement in themselves each year."
>
> "Students acquire sufficient comprehension, fluency, and literary skills in English to successfully participate in the regular English curriculum."

In general, the tone of their comments was consistently positive. It seemed that an unusually high proportion expressed enthusiasm for different aspects of the program; many felt that the program's strategies for acquisition of English and literacy were effective. At times, however, some expressed frustration about aspects of the program.

Concerns and Areas for Program Refinement and Revision. Teachers identified two areas of concern. The primary concern, voiced by 18 percent of the teachers, was the lack of structure. Some of these teachers wanted more structure in terms of scope and sequence for developing skills and abilities in English language arts, more specific guidelines or teacher guides, and basal readers to augment the use of literature.

Others used the term "structure" to indicate their concerns about the lack of consistency from teacher to teacher. One teacher, for example, complained that "everyone does something different."

Some sample comments:

> "Lack of a scope and sequence throughout the grades. *I feel there should be a uniform curriculum.*"
>
> "Lack of continuity—some teachers conduct programs that are still basal-text-, and skill-bound, so a lot of time is spent getting kids comfortable about the reading/writing process and getting them to become healthy risk-takers."

Many teachers seemed to be very satisfied with the integrated whole-language approach used in the program. Others indicated an insecurity about having the responsibility to develop the entire day's curriculum without any teacher guide or basal series. This same concern is reflected in the emerging literature on the implementation of whole language theory (Gersten, 1991; McCaslin, 1989; Maguire, 1989; Reyes, in press; Woodward & Gersten, 1990).

It is interesting that two very different issues emerge consistently. The first is that a sizeable proportion of teachers desire more emphasis on systematic phonics and other English language arts skills. Sixteen teachers (12 percent) voiced concerns about the lack of emphasis in bilingual immersion on areas such as word-attack skills, phonics, and test-taking skills. They want a structured component of the program to complement the more open-ended emphasis on literature. Some support exists in the research for this concern; there is an indication that the lack of any type of structured teaching of word attack and analysis skills is likely to cause problems for some students (Chall, 1989; Stahl & Miller, 1989; Gersten, 1991). Other teachers feel that some teachers experiment *too little* and utilize the basal structure as a crutch.

One other consistent concern emerged. Eight teachers said the program needed to be more challenging. That is, it needs to move away from basic skills to higher-order thinking skills and/or more challenging reading. Some teachers mentioned basal readers as a tool to move students on to grade-level work. One teacher said, "with the strategies of the bilingual immersion, there is no need to use books below grade level." Woodward and Gersten (1991) noted that immersion classrooms used below-grade level reading materials fairly consistently.

The failure to include expository books and material in whole language programs has been documented by the research of Hiebert and Fisher (1989). Hiebert and Fisher note that this practice is likely to have harmful effects on students. The tendency to utilize too many books and novels that are below grade level may also have a detrimental effect on the students when they make the rather abrupt transition to middle schools (Gersten, 1991).

The bilingual immersion teachers in El Paso do raise some legitimate concerns about the program as it is currently implemented. Yet their criticisms are not aimed at the bilingual immersion approach itself, but at the instructional shortcomings of the whole language context within which bilingual immersion occurs.

The issues raised by the teachers point to areas in which the program could be refined and improved. Even so, these teachers express a high level of approval of the immersion approach overall and, in particular, of its rapid introduction of students into English language instruction in an interesting, innovative fashion.

Transitional bilingual education. When asked to name the one most positive feature of transitional bilingual education, 43 percent of the teachers named the emphasis on Spanish. They gave various reasons for this emphasis. Some cited the transfer concept (Cummins, 1980, 1981; Hakuta, 1986; Hakuta & Gould, 1987): the opportunity for students to build a strong foundation in their home language before making the transition to an all-English program. At least twelve teachers (7 percent) praised the idea of teaching

the content areas in Spanish so that students would not fall behind in these areas. And quite a few teachers said that it was important that students feel comfortable in school and be allowed to use their home language in that setting.

No other dominant themes emerged, but various program strengths were mentioned by at least one teacher. These strengths included the fact that the instructional grouping arrangements in transitional bilingual education allowed for individual differences among students in language proficiency, the quality of selected instructional materials utilized in the program, and the amount of structure in the program.

Following are some quotes from TBE teachers:

> "The excellent foundation they develop in phonics skills can be applied to both English and Spanish."
>
> "[The greatest strength is] cultural awareness and pride in their own language."
>
> "It allows students to progress in knowledge/learning of the content areas without impediment."

Although virtually all of the transitional bilingual education teachers noted positive aspects about their program, a sense of frustration permeated some of the comments. A few teachers marked "There are None" when asked to delineate positive aspects in the open-ended segment.

Perceived weaknesses. Ironically, the very facet of the program mentioned as the program's greatest strength was cited by almost as many teachers as its greatest weakness. Sixty-five teachers (38 percent) said that the emphasis on Spanish had a negative effect on many of these students. Oddly, a few of these respondents were the same ones who praised the use of Spanish in the program in answer to the previous question. Their positive response was qualified by suggestions that included teaching the content areas in English after the first year (a procedure used in bilingual immersion), or allowing more time for English instruction during the day.

It was obvious from teachers' comments that many felt very strongly about this issue. Some sample comments:

> "I feel that not enough English is taught!! 90 minutes a day, 270 hours a year!! . . . Children are like sponges; they can learn, pick up much. All we have to do is expose them and not hold them back. Teaching Spanish most of the day can hold them back."
>
> "Since the major part of the day is spent in Spanish, students are not motivated to learn English. I have seen students who have spent five years in the program but cannot communicate in English. A more intensive English program is needed."
>
> "Students are taught in Spanish during the most effective years for learning English—as a result, they are never fluent in English. Test scores will never go up until students are required to speak English in the schools."
>
> "The Spanish component is the greatest strength and the greatest weakness."

Several transitional bilingual education teachers commented that very few students made the transfer from Spanish to English successfully. Several commented that students used Spanish as a "crutch." In a somewhat similar vein, twenty-five teachers (15 percent) complained that the program was holding students back or that students stayed in the program too long.

Several teachers commented that the program separated students from their English-dominant peers. According to one teacher, "It hinders the natural development of the child. It takes away the child's natural interaction with other peers who are already proficient in the use of the English language. Association and peer pressure are two of the most powerful tools that students use to learn new skills."

Student Interviews

Thirty students were selected from each program for small group interviews. Students were randomly chosen from those who had exited bilingual immersion or transitional bilingual education at the end of the fourth grade. Most of the students were sixth graders; due to retentions, five students were still in fifth grade.

With one exception, students were interviewed during their second year in a regular monolingual class. Of the 60 students selected, 59 were willing to be interviewed. A researcher conducted all the interviews, meeting with groups of about three to five students at a time.

As expected, many of the students were quite shy about being interviewed by an unfamiliar adult. Nevertheless, one or more natural leaders appeared in each group who were more poised and confident than the others and often led the discussion of all the questions.

The first series of questions were general ones about school:

1. Which subject do you like the best? What do you like about it?

About half the students in both groups said they liked math best, generally because "it's easy" or "I'm good at it." In the transitional bilingual education group, five students liked science because of the interesting and "fun" experiments and the topics they studied. Other transitional bilingual education responses, with two students each, were physical education, band/orchestra, and art.

In the bilingual immersion group, the most common response after math was physical education, which was mentioned eight times. The next two favorites were art (five votes) and band/orchestra (four). Science was mentioned only once.

Only one student in each group mentioned reading/language arts as a favorite subject, a probable indication that it is difficult for students. It is interesting, too, that math—with its reasonably well-controlled vocabulary demands and relatively limited background knowledge demands—was so popular. Student performance on the ITBS indicates that both groups performed better in math than in reading. Social studies was not mentioned at all.

2. Which subject is hard for you? Why is it difficult?

Sixteen students in each group (53 percent) mentioned either language arts or social studies (about evenly split) as the subject that is most difficult. Students found the reading material in their main-

stream sixth grade social studies class too hard and said they did not understand the questions at the end of the chapters.

Bilingual immersion students mentioned difficulties with vocabulary, story maps, and homework. Transitional bilingual education students mentioned vocabulary and grammar as problem areas. Both groups said sixth grade language arts (in English) was just too hard.

3. Do you like school? Why or why not?

Transitional bilingual education students answered slightly more positively to this question (63 percent "yes") than bilingual immersion students (59 percent "yes"). In both groups, students who answered "no" said that school was boring or involved too much work. In the transitional bilingual education group, those who liked school gave a wide variety of reasons. The predominant reason was that school was "fun" and involved a lot of social activities. Six students mentioned that specific classes made school interesting. Two of them voted for physical education. The opportunity to learn and good teachers each gained two votes.

The responses of the bilingual immersion students were more narrowly focused. Five mentioned social activities and "fun," five said they liked specific classes, and four appreciated the opportunity to learn.

The next two questions focused on issues related to language acquisition and the language of instruction:

4. When you started school in first grade, you were in a class where the teacher taught part of the day in English and part in Spanish—do you remember this? How did you feel about learning in both English and Spanish?

Ninety-two percent of the students remembered being in a class taught partially in English and partially in Spanish during some part of their careers; four could not remember having been in either a transitional bilingual or a bilingual immersion class. Only a small number of students in either group expressed negative feelings. Six transitional bilingual education students, all of whom were from the same school, said that they had found it confusing to learn in two languages. Three immersion students regretted that they could not continue learning in Spanish as well as in English because they wanted to become better educated in Spanish.

5. Which language do you feel most comfortable speaking today?

About the same percentage of students in each program, almost a third, felt more comfortable speaking Spanish. About 9 percent more bilingual immersion students seemed to be at ease in either language.

Table 3.4

Results of Parent Questionnaire (TBE N = 68, BIP N = 38)

	Yes		Not Sure		No	
	TBE	*BIP*	*TBE*	*BIP*	*TBE*	*BIP*
My son/daughter really likes school.	93%	**95%**	7%	**5%**	--	--
My son/daughter has learned to speak English very well.	79%	**90%**	11%	**3%**	10%	**8%**
My son/daughter reads well in English.	70%	**82%**	20%	**11%**	10%	**8%**
My son/daughter enjoys reading in English.	89%	**97%**	10%	--	1%	**3%**
My son/daughter speaks Spanish very well.	89%	**87%**	4%	**5%**	7%	**8%**
My child has learned enough English to be successful in regular English speaking classroom.	75%	**76%**	21%	**16%**	4%	**8%**
I think my son/daughter will be successful in middle/junior high school.	81%	**87%**	16%	**11%**	3%	**3%**
I am happy with the education my child has received.	94%	**97%**	4%	**3%**	1%	--

Parent Survey

A survey printed in both English and Spanish was sent through the U.S. mail to parents or guardians of the students in the sample. Parents were asked to respond with "Yes," "No," or "Not Sure" to eight statements about their children's school experiences and achievement. The rate of return for transitional bilingual education was approximately 44 percent; the rate for bilingual immersion was 27 percent. It is unclear as to the reasons for the differential return rates. Survey results are reflected in Table 3.4.

Parents' responses to both programs were generally positive. The great majority of the parents in both groups affirmed that their children liked school, and they expressed satisfaction with their children's educatic n.

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But when parents were asked whether students had learned enough English for success in a regular English-speaking classroom, the number of positive responses dropped to about 75 percent in both groups. Responses were also very similar between the two groups on the question of students' ability to speak Spanish, though transitional bilingual education parents were slightly more positive.

Parent Survey Open-Ended Comments

A number of parents wrote comments in the space at the bottom of the survey provided for that purpose. A selection of comments regarding each program are presented below.

Transitional bilingual education. Almost half the transitional bilingual education parents made comments, 30 percent of which were generally positive about the schools, programs, or teachers in the district. Eleven of the parents wrote appreciative or thankful comments, mentioning the benefits their children had received from their school experiences. These included statements like:

> "Thank you for this program. My daughter has confidence when conversing in English."
>
> "My son's progress in English has been excellent, thanks to the teachers... who have cared and helped him with everything."
>
> "Thank you for the effort you have made to help our children learn English better."

Although most parents seemed satisfied with the program, seven expressed dissatisfaction with their child's progress in English, or felt that more instruction in English was necessary. Some sample comments from this group:

> "I would like for my son to be in class with children who know English because my son speaks Spanish a lot and here at home we all speak Spanish."
>
> "I think my daughter would benefit from an intensive English class more than from a regular English class."

Bilingual immersion. About a third of the bilingual immersion parents made additional comments. Almost all of these comments included some positive statement about the program or school. Three expressed a desire for bilingual education or for instruction in both English and Spanish to continue beyond the fourth grade because it had been good for their children. Three parents also commented on how well their children had learned English. A sample of bilingual immersion comments follows:

> "I feel it is very important for my daughter to continue her bilingual classes because they have made it easier for her to read and write in both languages."
>
> "My daughter has learned English very well."
>
> "My son has made progress in English and Spanish. I am happy for him and would like for him to continue his progress."

Summary and Conclusions

This evaluation contrasted two prominent approaches for educating language minority students in the United States: bilingual immersion and transitional bilingual instruction. The immersion program used in El Paso introduces English language instruction rapidly from the first grade onward. In addition, it utilizes sophisticated teaching strategies that provide rich language experiences, enabling students to express their ideas in English and to learn English while they are engaged in content area instruction.

El Paso's transitional bilingual education program is typical of many of its kind in urban areas in the United States in that the majority of the students' instructional day during the first four to five years is in Spanish, with 60 to 90 minutes a day reserved for English language instruction. When students' English language abilities have developed to a certain point, they begin the transitional phase of the program, in which they are given formal reading instruction in English and are taught their content area classes in English.

The current evaluation design is a refinement of earlier research by Ramirez and his colleagues (1990) in that it contrasts an immersion and a traditional bilingual approach within the same district. In his highly influential study, Ramirez contrasted transitional and maintenance bilingual approaches only across school districts and never compared immersion and traditional bilingual approaches. Furthermore, the Ramirez report ends its findings with the fourth grade, while this evaluation follows students through to the seventh grade—a time when the long-term effects of early intervention approaches are more evident.

Longitudinal Evaluation of Academic Achievement

One of the central comparisons in this evaluation was between the longitudinal effects of bilingual immersion and transitional bilingual education programs on academic achievement from the fourth to the seventh grade. Differences were initially significant in the area of reading and language, particularly in language, where differences were present in grades 4, 5, and 6. Nonetheless, by the seventh grade the ITBS scores show no significant differences in performance that can be related to the two bilingual programs.

Moreover, it is important to note that by the sixth and seventh grades the students' absolute level of English language achievement was low compared to national norms, but in the range typical for low income, minority students. Neither the bilingual immersion program nor transitional bilingual education brought its students up to the national norms, especially in the areas of reading (23rd-24th percentile for the bilingual immersion program and 21st percentile for the transitional bilingual education program) and vocabulary (16th and 15th percentiles respectively by the seventh grade). These levels of performance, sadly, are typical for low-income Hispanic students in the junior high school years (DeLa Rosa & Maw, 1990).

Mean scores in math were not quite as low: performance was within one-half standard deviation of the national norms. Scores on the Total Language subtest were also well within one-half standard deviation of national norms. In the bilingual immersion program, sixth graders were at the 37th percentile, and seventh graders were at the 39th percentile. In transitional bilingual education, sixth graders were at the 30th, and seventh graders at the 37th percentile. This low level of performance on standardized tests by low-income Latino students, particularly in the areas of reading and vocabulary, is a well-known phenomenon (De La Rosa & Maw, 1990; Garcia, 1991; Haycock & Navarro, 1988).

While the academic differences between the two groups used in this longitudinal comparison were non-significant by the end of the seventh grade, there was a difference in the number of students who enter mainstreamed sixth grade classrooms. While virtually all of

the bilingual immersion students were in regular classes, this was true of only two-thirds of the transitional bilingual education students.

El Paso's approach to intensive English-language instruction appears promising. A definite strength of the bilingual immersion program is that it utilizes modern conceptions of second language instruction and language acquisition. Students learn English while listening to interesting stories and discussing them, and while learning mathematics—rather than through the relatively sterile contexts of many English-as-a-second-language lessons. Language acquisition is merged with cognitive instruction.

This point was made by Teschner (1988) in his analysis of earlier research on El Paso's bilingual immersion program. Teschner noted that "one cannot overlook the strong likelihood that the context of (bilingual immersion's) English exposure...is at least as important...as the greater exposure itself" (pp. 15-16). By that, he means that learning English through discussions of high quality children's literature, journal writing, and careful use of discussion techniques is far preferable to the contrived nature of conventional ESOL instruction.

Observational studies of second language programs by Ramirez and his colleagues noted virtually no instances of meaningful dialogue, few higher order or inference questions, and little opportunity for students to expand upon their responses. In the bilingual immersion lessons that we observed (Schneider, 1990; Woodward & Gersten, 1991), we noted numerous examples of students being asked to draw inferences, to justify responses, and to expand upon or clarify responses made by their peers. All of these activities are likely not only to accelerate English language acquisition, but also to accelerate overall achievement (Ramirez et al, 1990; Resnick and Klopfer, 1989).

One reason this may not have been reflected in the longitudinal comparison of the two programs is that it is unclear to what extent these higher order operations were assessed on the Iowa Test of Basic Skills, the measure utilized in this evaluation (Garcia, 1991). Recent research indicates that criterion performance associated with whole language instruction is not reflected on multiple-choice, norm-referenced measures like the ITBS (Stahl & Miller, 1989; Pearson & Valencia, 1987)

Nevertheless, we also observed one limitation of the current bilingual immersion program, one that was a source of concern for some teachers—the lack of any type of system or structure for building core academic skills. It is our view that overall levels of achievement would be enhanced if some systematic skills instruction were combined with the whole-language/natural language instructional strategies of the bilingual immersion program (See Reyes, 1990; Gersten & Dimino, in press).

Perceptions of Teachers, Parents and Students

The surveys of teachers and parents, as well as student interviews, revealed positive attitudes toward many aspects of both programs. The most important finding may be the feeling of the immersion teachers that their program did a better job of teaching English—and hence, was more effective in preparing students for later schooling. Over twice as many immersion teachers felt that their program was successful in developing students' oral English fluency and capacity (74 percent versus 36 percent for the transitional bilingual teachers). Immersion teachers were generally enthusiastic about their program and tended to be critical only of the gaps they saw in whole language as a method for teaching reading and writing (not of the ratio of English to Spanish instruction each day).

On the other hand, teachers in the transitional bilingual approach had decidedly mixed reactions to the heavy native language emphasis. While 43 percent of the teachers thought that the emphasis on Spanish was the most positive aspect of the program, another 38 percent said that the extensive use of Spanish had a *negative* effect on many of these students.

Finally, neither the immersion teachers, parents, nor students said that the approach was stressful. The lack of reported stress is in stark contrast to the common belief among bilingual education advocates that immersion approaches are detrimental to students' self-concepts and personal and social development.

Implications at the National Level

Too often, social scientists search for significant differences between different instructional approaches. What is intriguing about this evaluation is that **no significant differences** were found in the scores of the seventh graders on the ITBS. The lack of significant differences supports policy decisions, like those of El Paso's, to create alternatives in bilingual education. Porter (1991) noted that it is important to allow "families of Latino students with limited English proficiency...a fundamental choice in their children's schooling—the right to choose programs featuring intensive English-language instruction rather than segregated classrooms where Spanish is the norm" (p. 48).

These results also indicate that there may be advantages to intensive English-emphasis instruction in the early grades. Well-designed bilingual immersion leads to more rapid, more successful, and increased integration of Latino students into the mainstream, with no detrimental effects in any area of achievement for students who took part in this program. These results and the observations of the immersion classrooms conducted by the authors point to certain aspects of the program that have direct relevance for other districts attempting similar types of programs.

The major strengths of the bilingual immersion program are (1) its utilization of contemporary thinking on language acquisition and literacy development and (2) its relatively stress-free approach to the rapid acquisition of English in the early primary grades. These assets should be seriously considered by districts as they explore options for instructional strategies for second language students, especially if districts value early entry into the mainstream and early growth of English language competence at both the conversational and conceptual levels. If anything, this research supports flexibility in exploring and researching alternatives to traditional bilingual education approaches.

There appear to be some advantages to the bilingual immersion program that go beyond its current conception and implementation in El Paso schools. The most obvious is that such a program could in all likelihood be implemented with one bilingual teacher for every three to five classrooms. Using a team-teaching model, this bilingual teacher could teach the Spanish component for all three to five classes, since this component tends to last from 30 to 90 minutes per day. Considering the large shortage of qualified and certified bilingual teachers nationwide, such a strategy could be a definite advantage for large urban districts, such as New York or San Diego, that are struggling with the problem of filling bilingual positions. It could be equally advantageous for smaller districts that have only one or two bilingual teachers but that have many students requiring some type of second language instruction.

Bilingual immersion does seem to provide some benefits to students in terms of rapid English acquisition and increased integration into the mainstream—and we have found no discernible drawbacks. In fact, the increased integration resulting from bilingual immersion may lead to a decrease in dropout rates among Hispanic students in junior and senior high school; it may even have other unanticipated effects. Subsequent research is necessary to explore this phenomenon.

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